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Serial No 10/623,866
Amendment Dated: June 17, 2008
Reply to Office Action Mailed: March 17, 2008
Attorney Docket No. 101246.52582US

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process system comprising:

a chamber;

a supply plate which has a plurality of gas holes and supplies a process gas into said chamber through said gas holes;

a first diffusion portion located in a first disk which diffuses said gas in a direction approximately parallel to a major surface of said supply plate; and

a second diffusion portion which leads said gas diffused by said first diffusion portion to said gas holes, said second diffusion portion comprised of a second disk ~~having a plurality of grooves formed in one side thereof in fluid communication with each other and extending radially from approximately the center of the second disk, a first one of said grooves being in fluid communication with a through hole located in said first disk at an end portion of said first groove, and the remaining grooves having through holes formed therein,~~ wherein said second diffusion portion is placed over said supply plate to form a hollow portion between said second disk and said supply plate such that said gas can be supplied from said first diffusion portion to said hollow portion; and

said process system further comprising a partition member in said hollow portion which separates said hollow portion into a center area and an end area, and a gas supply

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portion comprising mutually independent gas flow passages, wherein a first gas flow passage passes through said first disk and said second disk via a plurality of grooves formed in one side of said second disk in fluid communication with each other and extending radially from approximately the center of the second disk, a first one of said grooves being in fluid communication with a through hole located in said first disk at an end portion of said first groove, and the remaining grooves having through holes formed therein, and supplies said gas via first through holes exclusively to said center area of the supply plate, and a second gas flow passage supplies said gas that is diffused by said first diffusion portion via second through holes and said second diffusion portion exclusively to said end area of the supply plate, wherein the gas flow rates in the mutually independent gas flow passages are independently controlled, ~~[[the]]~~ a first gas flows from the center area of the hollow portion through the supply plate to a center area of the process chamber, and ~~[[the]]~~ a second gas flows from the end area of the hollow portion through the supply plate to an end area of the process chamber such that the gases do not mix prior to entering the process chamber, and first and second gas flow passages are separate.

2. (Previously Presented) The process system according to claim 1, wherein said first disk comprises a plurality of grooves formed in one side thereof and communicating with one another and through holes formed in said plurality of grooves and led to the other side.

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3. (Previously Presented) The process system according to claim 2, wherein at least one of said grooves in said first disk are provided at positions to which said gas is supplied, and said gas supplied to said at least one groove is dispersed to the other grooves in said first diffusion portion and flows out to the other side through said through holes respectively provided in said other grooves.

4-6. (Canceled)

7. (Original) The process system according to claim 1, wherein said first diffusion portion is comprised of a cylindrical member having a plurality of linear holes communicating with one another, formed by boring and sealing end portions of bored portions, at least one of said holes is supplied with said gas and said gas supplied to said at least one hole is dispersed to the other holes.

8. (Previously Presented) The process system according to claim 7, wherein said cylindrical member has connection holes provided in such a way as to be in communication with said linear holes from its one side, and said gas supplied to said linear holes is supplied to said second diffusion portion from said connection holes.

9. (Withdrawn) A process method which uses a process system comprising a chamber and a supply plate which has a plurality of gas holes and supplies a process gas into said chamber through said gas holes, comprising: a first diffusion step which linearly diffuses

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said gas in a direction approximately horizontal to a major surface of said supply plate; and a second diffusion step which leads said gas diffused in said first diffusion step to said gas holes.

10. (Previously Presented) The process system according to claim 1, wherein a linear gas flow passage approximately parallel to a major surface of said supply plate is formed in said first diffusion portion, and said gas is diffused in a direction approximately parallel to the major surface of said supply plate.

11. (Previously Presented) The process system according to claim 7, wherein said first diffusion portion has a plurality of cylindrical members, and each cylindrical member comprises said plurality of linear holes formed from a sidewall of said cylindrical members toward a center thereof.

12. (Previously Presented) The process system according to claim 11, wherein said cylindrical members respectively constitute gas flow passages independent from each other.

13. (Withdrawn) A process system comprising: a chamber, a support which is provided inside said chamber for placing a process target thereon; a first gas supply passage which has gas holes, and supplies a gas through said gas holes to a position corresponding to a center area of said process target in said chamber; a second gas supply passage which has

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gas holes, and supplies a gas through said gas holes to a position corresponding to an end area of said process target in said chamber; and a controller which controls a ratio of amounts of gases flowing through said first gas supply passage and said second gas supply passage.

14. (Withdrawn) The process system according to claim 13, wherein said first and second gas supply passages supply a same gas to said chamber.

15. (Withdrawn) The process system according to claim 13, wherein said controller includes a first mass flow controller provided to said first gas supply passage, a second mass flow controller provided to said second gas supply passage, and a control unit which controls said first and second mass flow controllers.

16. (Withdrawn) The process system according to claim 13, wherein said controller controls amounts of gases output from said first and second gas supply passages in such a way as to make a thickness of a film formed on said process target uniform.

17. (Withdrawn) The process system according to claim 13, wherein said controller controls kinds and amounts of gases output from said first and second gas supply passages in such a way as to make thicknesses of a plurality of films formed on said process target uniform respectively.

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18. (Withdrawn) The process system according to claim 13, wherein said first and second gas supply passages have, in common, a supply plate which has a plurality of gas holes for supplying a process gas into said chamber through said gas holes; and said first and second gas supply passages respectively have a first diffusion portion which diffuses said gas in a direction approximately horizontal to a major surface of said supply plate, and a second diffusion portion which leads said gas diffused by said first diffusion portion to said gas holes.

19. (Withdrawn) A process method comprising: setting a process target inside a chamber; and performing a film forming process by supplying process gases with different rates to a position corresponding to a center area of said process target in said chamber and to a position corresponding to an end area of said process target.

20. (Previously Presented) The process system according to claim 1, wherein each mutually independent gas flow passage is adapted to receive said process gas from a common gas supply source.

21. (Previously Presented) A process system comprising:
a chamber;
a supply plate which has a plurality of gas holes and supplies a process gas into said chamber through said gas holes;

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a first diffusion portion located in a first disk which diffuses said gas in a direction approximately parallel to a major surface of said supply plate; and

a second diffusion portion located in a second disk which leads said gas diffused by said first diffusion portion to said gas holes;

wherein a plurality of grooves are formed in one side of said second disk in fluid communication with each other and extending radially from approximately a center of the second disk, an end portion of a first one of said grooves being in fluid communication with a through hole located in said first disk, and the remaining grooves having through holes formed therein, and

a first independent gas flow passage supplies said process gas only into a center area of said chamber via said plurality of grooves, and first gas holes, and a second independent gas flow passage supplies said process gas only into an end area of said chamber via said first diffusion portion, second gas holes, and said second diffusion portion, wherein the first independent gas flow passage and the second independent gas flow passage are each formed in said first disk and in said second disk and the process gas in the first independent gas flow passage and the process gas in the second independent gas flow passage do not mix before flowing into said chamber.

22. (Previously Presented) The process system according to claim 21, wherein the process gas flow rates in the mutually independent gas flow passages are independently controlled.

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23. (Previously Presented) The process system according to claim 1, wherein the gas flow rates into the chamber are independently controlled.

24. (Currently Amended) A process system comprising:
a chamber;
a supply plate which has a plurality of gas holes and supplies a process gas into said chamber through said gas holes;
a first diffusion portion located in a disk which diffuses said gas in a direction approximately parallel to a major surface of said supply plate via a plurality of grooves formed in one side thereof and communicating with one another and with a plurality of through holes formed in said grooves; and
a second diffusion portion which leads said gas diffused by said first diffusion portion to said gas holes, said second diffusion portion comprised of a groove formed in said disk at an opposite side thereof from said first diffusion portion, wherein said second diffusion portion is placed over said supply plate to form a hollow portion between said disk and said supply plate such that said gas can be supplied from said first diffusion portion via said through holes to said hollow portion; and
said process system further comprising a partition member in said hollow portion which separates said hollow portion into a plurality of areas center area and an end area, and a gas supply portion comprising mutually independent gas flow passages, wherein a first gas flow passage passes through said disk and supplies said gas via first gas holes exclusively to said center area of the supply plate, and a second gas flow passage passes through said disk

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~~and supplies said gas that is diffused by said first diffusion portion exclusively to said end area of the supply plate, wherein the gas flow rates in the mutually independent gas flow passages are independently controlled, the first gas flows from the center area of the hollow portion through the supply plate to a center area of the process chamber, and the second gas flows from the end area of the hollow portion through the supply plate to an end area of the process chamber such that the gases do not mix prior to entering the process chamber, and first and second gas flow passages are separate.~~